
California Board of Registered Nursing

2009-2010 Annual School Report

Data Summary and Historical Trend Analysis

A Presentation of Pre-Licensure Nursing Education Programs in California

San Joaquin Valley

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Prepared by:
Tim Bates, MPP
Dennis Keane, MPH
Joanne Spetz, PhD
Center for the Health Professions
University of California, San Francisco
3333 California Street, Suite 410
San Francisco, CA 94118



INTRODUCTION

Each year, the California Board of Registered Nursing (BRN) requires all pre-licensure registered nursing programs in California to complete a survey detailing statistics of their programs, students and faculty. The survey collects data from August 1 through July 31. Information gathered from these surveys is compiled into a database and used to analyze trends in nursing education.

The BRN commissioned the University of California, San Francisco (UCSF) to conduct a historical analysis of data collected from the 2000-2001 survey through the 2009-2010 survey. In this report, we present ten years of historical data from the BRN Annual School Survey. Data analyses were conducted statewide and for nine economic regions¹ in California, with a separate report for each region. All reports are available on the BRN website (<http://www.rn.ca.gov/>).

This report presents data from the 8-county San Joaquin Valley Region. Counties in the region include Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. All data are presented in aggregate form and describe overall trends in the areas and over the times specified and, therefore, may not be applicable to individual nursing education programs. Additional data from the past ten years of the BRN Annual School Survey are available in an interactive database on the BRN website.

Data collected for the first time from the 2009-2010 survey are identified by the symbol (§). The reliability of these new data will be reviewed and considered for continued inclusion in future surveys.

¹ The nine regions include: (1) Northern California, (2) Northern Sacramento Valley, (3) Greater Sacramento, (4) Bay Area, (5) San Joaquin Valley, (7) Central Coast, (8) Southern California I (Los Angeles and Ventura counties), (9) Southern California II (Orange, Riverside, and San Bernardino counties), and (10) Southern Border Region. Counties within each region are detailed in the corresponding regional report. The Central Sierra (Region 6) does not have any nursing education programs and was, therefore, not included in the analyses.

DATA SUMMARY AND HISTORICAL TREND ANALYSES

This analysis presents pre-licensure program data from the 2009-2010 BRN Annual School Survey in comparison with data from previous years of the survey. Data items addressed include the number of nursing programs, enrollments, completions, retention rates, student and faculty census data, the use of clinical simulation by nursing programs, and clinical space and practice restrictions.

Trends in Pre-Licensure Nursing Programs

Number of Nursing Programs

There are 13 nursing programs² in the San Joaquin Valley region that lead to RN licensure. Of these programs, 8 are at the ADN level, four are BSN programs, and one is an ELM program. All but two of the pre-licensure nursing programs in the San Joaquin Valley Region are public.

Number of Nursing Programs

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Total # Nursing Programs	8	9	9	9	9	11	13	12	13	13
ADN Programs	6	6	6	6	6	6	7	7	8	8
BSN Programs	2	3	3	3	3	3	4	4	4	4
ELM Programs						2	2	1	1	1
Public Programs	8	9	9	9	9	11	11	10	11	11
Private Programs	0	0	0	0	0	0	2	2	2	2

Admission Spaces and New Student Enrollments

Admission spaces available for new student enrollments have been increasing over the past ten years, more than doubling from 615 spaces in 2000-2001 to 1,379 in 2009-2010. In 2009-2010, the total number of available spaces declined for the first time since 2002-2003. However, new student enrollments increased as programs in the region continue to over enroll students. In 2009-2010, 1,379 available spaces were filled by a total of 1,598 students. The most frequently reported reasons for over enrolling students were to account for attrition and to make use of grant or donor funding.[‡]

² A program that was new to the San Joaquin Valley region in 2006-2007 was included in the regional breakdown and reports for the first time this year. All historical data in the report were changed to reflect this. Therefore, regional reports published in previous years may contain different data than what is presented here.

[‡] Data were collected for the first time in the 2009-2010 survey.

Availability and Utilization of Admission Spaces

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Spaces Available	615	765	762	780	951	1,150	1,366	1,390	1,500	1,379
New Student Enrollments	595	793	740	779	949	1,261	1,455	1,484	1,587	1,598
% Spaces Filled	96.7%	103.7%	97.1%	99.9%	99.8%	109.7%	106.5%	106.8%	105.8%	115.9%

After declining 7.6% in 2008-2009, qualified applications to programs in the region increased by 16.0% (n=573) in 2009-2010. Nursing programs in the San Joaquin Valley region received 2,552 more applications for their programs than could be accommodated. In 2009-2010, 61.5% of qualified applications were not accepted for admission.

Applications Accepted and Not Accepted for Admission*

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Qualified Applications	931	1,067	1,203	1,732	2,246	2,744	2,667	3,871	3,577	4,150
<i>Accepted</i>	595	793	740	779	949	1,261	1,455	1,484	1,587	1,598
<i>Not Accepted</i>	336	274	463	953	1,297	1,483	1,212	2,387	1,990	2,552
% Qualified Applications <i>Not Accepted</i>	36.1%	25.7%	38.5%	55.0%	57.7%	54.0%	45.4%	61.7%	55.6%	61.5%

*Since these data represent applications rather than individuals, an increase in qualified applications may not represent equal growth in the number of individuals applying to nursing school.

New student enrollments in the region's pre-licensure nursing programs have increased in each year since 2002-2003, driven by the steady enrollment growth of the region's ADN programs. BSN program enrollment reached its ten-year high (n=404) in 2007-2008. Since then, enrollment in these programs has decreased slightly, to 325 in 2008-2009 and 336 in 2009-2010. No new enrollments were reported by the region's ELM program in 2009-2010. The vast majority of nursing students (79%) in the San Joaquin Valley region continue to be educated in ADN programs.

New Student Enrollment by Program Type

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
New Student Enrollment	595	793	740	779	949	1,261	1,455	1,484	1,587	1,598
ADN	449	623	538	554	734	945	1,070	1,080	1,209	1,262
BSN	146	170	202	225	215	238	325	404	325	336
ELM						78	60	0	53	0
Private							105	96	147	152
Public	595	793	740	779	949	1,261	1,350	1,388	1,440	1,446

Student Completions

The number of students who completed one of the region's nursing programs has more than doubled (n=743) over the past decade, from 505 in 2000-2001 to 1,248 in 2009-2010. However, student completions between 2008-2009 and 2009-2010 have remained stable. ADN completions increased in 2009-2010, whereas BSN programs declined. Of the 1,248 students that completed a nursing program in the region in 2009-2010, 80.7% (n=1,007) of them completed an ADN program, 18.7% (n=233) completed a BSN program, and 0.6% completed an ELM program.

Student Completions

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Student Completions	505	556	653	644	765	922	995	1,178	1,240	1,248
ADN	422	454	512	510	598	706	805	928	982	1,007
BSN	83	102	141	134	167	216	190	199	258	233
ELM						0	0	51	0	8

Retention Rate

Of the 850 students scheduled to complete a nursing program in the 2009-2010 academic year, 87.6% (n=745) completed the program on-time, 3.5% (n=30) are still enrolled in the program, and 8.8% (n=75) dropped out or were disqualified from the program. Although it appears that the number of students scheduled to complete a nursing program in the region decreased between 2008-2009 and 2009-2010, this decrease is likely due to missing data rather than to an actual decrease in the number of students scheduled to complete a nursing program. The 87.6% retention rate reported in 2009-2010 is the highest reported in the past decade; similarly, the 8.8% attrition rate and the 3.5% still enrolled rate are the lowest of the past decade.

Student Cohort Completion and Retention Data

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Students Scheduled to Complete the Program	643	610	821	700	939	1,012	985	1,051	1,056	850
Completed On Time	463	433	609	529	700	729	681	804	803	745
Still Enrolled	78	89	129	108	89	142	128	96	138	30
Attrition	102	88	83	63	150	141	176	151	115	75
Retention Rate*	72.0%	71.0%	74.2%	75.6%	74.5%	72.0%	69.1%	76.5%	76.0%	87.6%
Attrition Rate	15.9%	14.4%	10.1%	9.0%	16.0%	13.9%	17.9%	14.4%	10.9%	8.8%
% Still Enrolled	12.1%	14.6%	15.7%	15.4%	9.5%	14.1%	13.0%	9.1%	13.1%	3.5%

*Retention rate = (students who completed the program on-time) / (students scheduled to complete the program)

There has been fluctuation in the retention and attrition rates over the ten-year period documented in the above table. There were changes to the survey between 2003-2004 and 2004-2005, and between 2004-2005 and 2005-2007 that may have affected the comparability of these data over time.

Student Census Data

The total number of students enrolled in nursing programs in the San Joaquin Valley region has grown by 165% over the past decade (n=1,820), from 1,106 on October 15, 2001, to 2,926 on October 15, 2010. Total enrollment in the region's ADN programs declined slightly compared with the previous year, resulting in a slight decrease in the overall student census in the region between 2009 and 2010.

Student Census Data*

Program Type	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009**	2010
ADN Program	981	1,050	1,128	1,260	1,199	1,614	1,873	1,567	2,076	1,960
BSN Program	125	153	571	681	664	655	829	838	892	916
ELM Program						73	56	0	49	50
Total Nursing Students	1,106	1,203	1,699	1,941	1,863	2,342	2,758	2,405	3,017	2,926

*Census data represent the number of students on October 15th of the given year. Blank cells indicated that the applicable information was not requested in the given year.

**In 2009, census data were not reported by one program. Therefore, these data were estimated based on other data reported by the school.

Clinical Simulation in Nursing Education

Data show that 91.7% (n=11) of the twelve nursing schools in the San Joaquin Valley region used a clinical simulation center³ between 8/1/09 and 7/31/10. Almost all schools that use clinical simulation centers reported that they use these facilities to standardize clinical experiences, to check clinical competencies, and to make up for clinical experiences. Data gathered also show that 72.7% (n=8) of the eleven nursing schools in the region that currently use a clinical simulation center have plans to expand it.

Reasons for Using a Clinical Simulation Center*	2007-2008	2008-2009	2009-2010
To standardize clinical experiences	83.3%	60.0%	90.9%
To provide clinical experience not available in a clinical setting	100.0%	60.0%	72.7%
To check clinical competencies	50.0%	70.0%	90.9%
To make up for clinical experiences	66.7%	80.0%	81.8%
To increase capacity in your nursing program	0.0%	20.0%	18.2%
Number of schools that use a clinical simulation center	6	10	11

*These data were collected for the first time in 2006-2007. However, changes in these questions for the 2007-2008 administration of the survey and lack of confidence in the reliability of the 2006-2007 data prevent comparability of the data. Therefore, data from previous years of the survey are not shown.

³ Clinical Simulation Center/Experience - students have a simulated real-time nursing care experience using hi-fidelity mannequins and clinical scenarios, which allow them to integrate, apply, and refine specific skills and abilities that are based on theoretical concepts and scientific knowledge. The experience includes videotaping, de-briefing and dialogue as part of the learning process.

Clinical Space & Clinical Practice Restrictions[‡]

Five of the thirteen (38.5%) pre-licensure nursing programs in the San Joaquin Valley region reported being denied access to 8 clinical placement sites in 2009-2010 that had been available during the 2008-2009 academic year, affecting a total of 98 students. Overall, the most frequently reported reasons for why programs were denied clinical space were competition for space arising from an increase in the number of nursing students in the region and staff nurse overload.

Reasons for Clinical Space Being Unavailable	ADN	BSN	Total
	%	%	%
Competition for Clinical Space due to Increase in Number of Nursing Students in Region	100%	50.0%	80.0%
Staff Nurse Overload	66.7%	50.0%	60.0%
No Longer Accepting ADN Students	0.0%	0.0%	0.0%
Displaced by Another Program	33.3%	50.0%	40.0%
Clinical Facility Seeking Magnet Status	66.7%	0.0%	40.0%
Decrease in Patient Census	33.3%	0.0%	20.0%
Nursing Residency Programs	33.3%	0.0%	20.0%
Other	0.0%	50.0%	20.0%
Number of programs	3	2	5

Six of the twelve (50%) schools in the San Joaquin Valley region with pre-licensure nursing programs reported that students in their programs had encountered restrictions to clinical practice imposed on them by clinical facilities. The most common types of restricted access students faced were bar coding medication administration, automated medical supply cabinets, and access to the clinical site itself due to a visit from the Joint Commission or another accrediting agency. Schools reported that it was uncommon to have students face restrictions on direct communication with health care team members, access to IV medication administration, or to an alternative setting due to liability.

Type of Restricted Access	Percentage of Schools (%)					# Schools
	Very Uncommon	Uncommon	Common	Very Common	N/A	
Bar coding medication administration	0.0%	0.0%	33.3%	66.6%	0.0%	6
Electronic Medical Records	0.0%	16.7%	16.7%	66.7%	0.0%	6
Glucometers	16.7%	33.3%	16.7%	33.3%	0.0%	6
Automated medical supply cabinets	0.0%	0.0%	50.0%	33.3%	16.7%	6
IV medication administration	33.3%	33.3%	16.7%	16.7%	0.0%	6
Clinical site due to visit from accrediting agency (Joint Commission)	16.7%	0.0%	33.3%	50.0%	0.0%	6
Direct communication with health team	50.0%	50.0%	0.0%	0.0%	0.0%	6
Alternative setting due to liability	50.0%	16.7%	16.7%	16.7%	0.0%	6

[‡] Data were collected for the first time in the 2009-2010 survey.

Faculty Census Data

The total number of nursing faculty in the San Joaquin Valley region has remained relatively stable since 2008. Of the 386 total faculty reported in 2010, 36.0% (n=139) were full-time and 64.0% (n=247) were part-time.

Nursing schools in the San Joaquin Valley region continue to report a need for faculty. On October 15, 2010, there were 32 vacant faculty positions in the region. These vacancies represent a 7.7% faculty vacancy rate, which is much higher than it has been in recent years.

Faculty Census Data¹

	Year									
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005²</i>	<i>2006*</i>	<i>2007*</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Total Faculty	173	194	222	237	281	328	340	382	389	386
Full-time	95	106	108	112	109	133	133	147	146	139
Part-time	78	88	114	125	97	195	207	235	243	247
Vacancy Rate**		6.3%	2.2%	3.3%	8.2%	3.8%	6.8%	4.7%	6.3%	7.7%
Vacancies		13	5	8	25	13	25	19	26	32

* The sum of full- and part-time faculty did not equal the total faculty reported in these years.

**Vacancy rate = number of vacancies/(total faculty + number of vacancies)

1 - Census data represent the number of faculty on October 15th of the given year.

2 - Faculty vacancies were estimated based on the vacant FTEs reported.

Summary

New student enrollments in the San Joaquin Valley region increased for the seventh consecutive year. At the same time, available space declined compared with the previous year, resulting in programs overenrolling students at the highest level in ten years.

The number of qualified applications to the region's nursing programs quadrupled over the past decade and increased 16% (n=573) over the last year. Nursing programs continued to receive more applications than could be accommodated. In 2009-2010, 61.5% (n=2,552) qualified applications were not accepted for admission.

Nursing program expansions have led to a growing number of RN graduates in the region. Between 2000-2001 and 2009-2010, graduations more than doubled (n=743) in the San Joaquin Valley. Graduations will continue to rise as larger cohorts of students complete RN programs. In addition, the 87.7% retention rate reported in 2009-2010 is the highest reported in the past ten years.

Eleven of the twelve San Joaquin Valley schools with pre-licensure nursing programs reported using clinical simulation in 2009-2010. The importance of clinical simulation is underscored by data collected for the first time in the 2009-2010 survey, which show that 38% of programs (n=5) were denied access to clinical placement sites that were previously available to them. In addition, 50% of schools (n=6) reported that their students had faced restrictions to specific types of clinical practice or to the clinical site itself during the 2009-2010 academic year.

The total number of faculty in the region has remained about the same over the past three years (n=386 in 2010), while the need for faculty has increased. On October 15, 2010, there were 32 vacant faculty positions reported. These vacancies represent a 7.7% faculty vacancy rate, which is much higher than vacancy rates reported in recent years and will challenge the ability of RN programs in the region to maintain or expand enrollments.

APPENDIX A – San Joaquin Valley Nursing Education Programs

ADN Programs

Bakersfield College
 College of the Sequoias
 Fresno City College
 Merced College
 Modesto Junior College
 San Joaquin Delta College
 San Joaquin Valley College
 West Hills College Lemoore

BSN Programs

CSU Bakersfield
 CSU Fresno
 CSU Stanislaus
 University of Phoenix – Northern California⁴

ELM Programs

CSU Fresno

APPENDIX B – BRN Education Advisory Committee Members

BRN Education Advisory Committee Members

Members

Loucine Huckabay, Chair
 Sue Albert
 Audrey Berman
 Liz Close
 Patricia Girczyc
 Marilyn Herrmann
 Deloras Jones
 Stephanie Leach
 Tammy Rice, MSN, RN
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Organization

California State University, Long Beach
 College of the Canyons
 Samuel Merritt University
 Sonoma State University
 College of the Redwoods
 Loma Linda University
 California Institute of Nursing and Health Care
 formerly with California Community College Chancellor's Office
 Saddleback College
 University of California, San Francisco

Ex-Officio Members

Louise Bailey California Board of Registered Nursing

Project Managers

Carol Mackay California Board of Registered Nursing
 Julie Campbell-Warnock California Board of Registered Nursing

⁴ Although this program was new to the region in 2006-2007, it was included in the San Joaquin Valley regional report for the first time this year. All historical data in the report were changed to reflect this.